

attention of the traveller. The small raceme of globose flowers with dark green leaves bordered at times with red cannot but present an attractive sight.

Acacia binervata, DC., Prod. II., 452.

A few trees of this wattle are scattered near the Tallebudgera scrubs, and on the eastern side of Tambourine mountain.

Acacia elongata, Sieb., DC., Prod. II., 451.

Among the broken rocks of Minto's Craig, near Coochin.

Acacia Baueri, Benth., in Hook., London Journ.

Close to the swamps near Burleigh Heads. It is redescribed by Baron von Mueller in Frag. xi., 33, from specimens obtained from the Richmond River, a locality not far off from Burleigh Heads.

CONTRIBUTION TO A KNOWLEDGE OF THE FISHES OF NEW
GUINEA.

By WILLIAM MACLEAY, F.L.S., &c.

Mr. Andrew Goldie, the well known New Guinea Explorer and Naturalist, has from time to time for the last year or more, sent me collections of Fishes taken by him at Port Moresby, and Cuppa Cuppa. The first named locality is well known, the other is the name of an inlet of the coast a little way further north. The Fishes are with a few exceptions well preserved, the native name of each species is duly recorded, in many cases most valuable notes are made of the colours of the living specimen, and altogether Mr. Goldie has shown himself to be a most excellent and intelligent collector. The enumeration of the species given in this Paper, demonstrates pretty clearly the fact—that the Fishes of that part of the New Guinea Coast differ but little

from those found by Dr. Bleeker to inhabit the seas of Netherlands India.

FAMILY PERCIDÆ.

1. PSEUDOLATES CAVIFRONS, All. & Macl.

All. and Macl., Proc. Linn. Soc., N.S.W., vol. i., p. 262, pl. 3.

Dr. Klunzinger, and I believe others, seem to have satisfied themselves that this species is identical with *Lates calcarifer*, Bloch, if so, the existence of teeth on the tongue must remove it from the genus *Lates*.

2. ANTHIAS MANADENSIS, Bleek.

Atl. Ichth. Perc., p. 19, tab. 10, f. 5.—Gunth., Cat. App. 1, p. 502.

“Tara” of the Aborigines.

Mr. Goldie describes this fish as being of a deep rose-pink all over, with the belly, fins and tail orange.

3. ANTHIAS CHEIROSPILOS, Bleek.

Atl. Ichth. Perc., p. 18, tab. 10, f. 1.—Gunth., Cat. App. 1, p. 502.

“Tara” of the Aborigines.

4. SERRANUS BÆNACK, Bl.

Bodianus bænack, Bloch., 4, p. 44, t. 226. *Serranus bænack*, Cuv. and Val., 2, p. 362.—Gunth., Cat. 1, p. 112. *Serranus bælang*, Bleek., Atl. Ichth. Perc., pl. 68, fig. 5.—Quoy & Gaim., Voy. Astrol., Poiss., p. 657, pl. 3, fig. 4. *Serranus nigrofasciatus*, Hombr. & Jacq., Voy. Pole Sud., Poiss., p. 36, pl. 2, fig. 1.

“Guna-Guna” of the Aborigines of Port Moresby.

A species of very wide range within the tropics, extending from the East Coast of Africa to the Polynesian Islands.

5. *SERRANUS URODELUS*, Forst.

Cuv. & Val. 2, p. 306, 6, p. 513.—Gunth., Cat. 1, p. 122.—Journ. Mus. Godef., Heft. 3, p. 3, tab. 3, fig. A.—Bleek., Atl. Ichth. Perc., pl. 43, fig. 2.

“Balala” of the Aborigines.

SERRANUS GUTTATUS, Bl.

Bodianus guttatus, Bloch., taf. 224. *Cephalopholis argns*, Bl., Schn., p. 311, taf. 61, *Serranus myriaster*, Cuv. and Val. ii., p. 233.—Rüpp. Atl. p. 107, taf. 27, fig. 1.—Less. Voy. Coq. Poiss. pl. 27. *Serranus argus*, Cuv. & Val., ii., p. 360.—Gunth., Cat. 1, p. 115.—Bleek., Atl. Ichth. Perc., tab. 42, fig. 3. *Serranus guttatus*, Gunth., Cat. 1, p. 119.—Journ. Mus. Godef. Heft. 3, p. 5, taf. 4.

7. SERRANUS HÆDTII, Bleek.

Gunther, Cat. 1, p. 139.—Journ. Mus. Godef., Heft. 3, p. 9, fig. 2.—Bleek., Atl. Ichth. Perc., tab. 5, fig. 2.

“Taguma” of the Aborigines.

One specimen twelve inches in length.

SERRANUS MINIATUS, Fork.

Gunth., Cat. 1, p. 118.—Journ. Mus. Godef., Heft. 3, p. 5, tab. 5. *S. cyanostigmatoides*, Bleek., Atl. Ichth., Perc. pl. 5, fig. 3.—Gunth., Cat. 1, p. 117.

“Balala” of the Aborigines—a name apparently given to several species of *Serranus*.

9. SERRANUS GOLDIEI, n. s.

D. 10/14. A. 3/7.

Of elongate slightly compressed form; the height of the body is one-fourth of the total length including the caudal fin, the length of the head from the extremity of the lower jaw to the end of the opercular flap is nearly equal to the distance from

the flap to the commencement of the caudal fin ; the profile of the head is a little convex near the snout, the space between the eyes is a little depressed and as wide as the diameter of the orbit ; the eyes are large, about two diameters from the extremity of the lower jaw, and more than four from the point of the opercular flap. The teeth are strong, numerous and sharp on the jaws, vomer and palatine bones, with two strong canines on each side of each jaw placed outside of the others and very close together ; the maxillary bone is very broad at its extremity and extends far beyond the vertical from the hind margin of the eye ; the praæoperulum is rounded behind with a slight emargination above the angle, but no apparent serrations ; the middle spine of the operculum is long and acute, the others are distant from it and very small. The scales are small all over the body and the lateral line is almost straight. The dorsal fin commences opposite the root of the pectorals, the spines are tolerably strong but not long, the first is the shortest, and from the fourth onwards the longest ; the soft dorsal more elevated than the spinous ; the caudal fin is slightly rounded behind ; the anal has the first spine short and the third a little longer than the second, the rays are much longer, and the posterior ones are inserted a very little in advance of the last of the dorsal ; the ventral fins take their rise behind the root of the pectorals, and do not reach to the extremity of them ; the pectorals are large, spreading and rounded and are inserted in a line with the large opercular spine. The colour in spirits is yellowish-brown covered all over—head, fins and all—with pale brown spots, smaller than the interspaces, two spots of a large size show on the back, one about the end of the spinous dorsal, the others over the tail ; the pectorals are more sparsely spotted except at the base.

I have only one specimen of this Fish, it measures about 16 inches in length ; unfortunately the number of its label has become illegible, so that I am unable to give the native name or the colours in a fresh state.

10. *SERRANUS FASCIATUS*, Forsk.

Gunth., Journ. Mus. Godef., Heft. 3, p. 6, taf. vi.

“Balakala” of the New Guinea Natives.

Dr. Gunther considers this species identical with *S. oceanicus*, *S. marginalis*, and *S. variolosus* of Cuv. and Val. I have three specimens without any apparent marking, excepting the black tips to the dorsal spines. Mr. Goldie’s note of the colour when caught is—“Light pink, top of head pinkish brown, side fins yellow, back fin with brown points.”

11. *SERRANUS SUMMANA*, Fork.

Bleek., Atl., Ichth. Perc. p. 61, pl. 7, f. 4. *S. polystigma*, Bleek., Gunth. Cat. 1, p. 129.

“Balala” of the Aborigines. Two specimens. One about a foot long was captured in fresh water.

12. *SERRANUS CORALLICOLA*, Cuv. and Val.

Bleek., Ael. Ichth. Perc. p. 53, pl. 30, f. 1. *S. altiveliooides*, Bleek., Gunth. Cat. 1, p. 127.

“Balala” of the aborigines.

I have several specimens averaging about 10 inches in length. Mr. Goldie’s description of the colouring when caught is—“Yellowish-brown with rich brown spots all over.”

13. *SERRANUS FUSCOGUTTATUS*, Rüpp.

Gunth., Cat. 1, p. 127.—Proc. Linn. Soc., N.S.W., vol. v., p. 316.—Bleek., Atl. Ichth. Perc. p. 57, pl. 29, f. 3.

“Balala” of the Aborigines.

Mr. Goldie says of this Fish—“Light brown with dark brown spots all over, fins and tail grey with grey spots.”

14. *SERRANUS SALMONOIDES*, Lacep.

Gunth. Cat. 1, p. 128. “Balala” of the Aborigines.

This fish grows to a large size; its colour according to Mr. Goldie when caught is—"Dirty white with golden-brown spots all over." It is quite distinct from *S. polypodophilus*, Bleek., with which Dr. Gunther seems to confound it.

15. *SERRANUS HEXAGONATUS*, Forst.

Gunth. Cat. 1, p. 140.—Proc. Linn. Soc., N.S.W., vol. v., p. 318, —Bleek., Atl. Ichth., Perc., p. 54, tab. 54, fig. 5.—Gunth., Journ. Mus. Godef. Heft. 3, p. 7, tab. 7, f. A. B.

This species seems to be common on the New Guinea Coast, as it is in all the warm seas south of the equator.

16. *SERRANUS MAGNIFICUS*, n. sp.

D. 11/16. A. 3/9.

Of a broad slightly compressed form, the height of the body is comprised three and a half times in the total length, the length of the head three times; the snout is short, broad and rounded, distant from the eye, which is small, about one diameter of the orbit; the space between the eyes is broad and almost flat; the maxillary bone reaches to beyond the vertical from the posterior margin of the eye, and is triangular behind with rounded angles; the canine teeth are rather small; the praæoperculum is rounded, raggedly serrated, and densely covered with very minute scales; the opercular spines are obtuse, the middle one large and flat; the spines of the dorsal fin are strong, and excepting the first two, are of nearly equal height, the soft dorsal is much higher and is rounded posteriorly; the caudal fin is large and expanded, densely covered with minute scales and rounded at the apex; the anal fin is more pointed-looking behind than the soft dorsal, the spines are short, the third largest; the pectorals are large, round and expanded; the ventrals are much shorter. The general colour seems to have been of an olive-green, with numerous lighter patches all over, turning yellow on the belly; all the fins are of a yellowish-ground-colour, with very numerous large brown spots

presenting as Mr. Goldie observes the appearance of tortoise-shell, the pectorals have two cross bars of the same colour at their base before the commencement of the spots.

I have only one specimen of this very handsome fish. It measures 18 inches in length and is of a heavy bulky appearance.

"Balala" of the natives.

17. *PLECTROPOMA LEOPARDINUM*, Cuv. & Val.

Gunth., Cat. 1, p. 157.—Bleek., Atl. Ichth. Perc. p. 25, pl. 18, f. 3. "Bogi" of the Aborigines.

Mr. Goldie's description is "Body brownish sap-green, darker on back, covered with small bright spots, each with dark border, socket of eye edged with brilliant turquoise blue."

18. *ANYPERODON LEUCOGRAMMICUS*, Cuv. & Val.

Gunth., Cat. 1, p. 96.—Bleek., Atl. Ichth. Perc., p. 28, tab 1, f. 4. "Balala" of the Aborigines.

19. *GENYOROGE BIDENS*, n. sp.

D. 11/13. A. 3/8. L. lat. 48.

Height of body slightly more than the length of the head and about two and one-third times in the total length exclusive of the caudal fin. Profile of head slightly concave, snout rather pointed, the maxillary bone reaches to the vertical from the anterior margin of the eye. The eyes are large, and considerably more than one diameter apart, the space between them being smooth and convex, the distance from the eye to the extremity of the snout is equal to two diameters of the orbit. The preoperculum is somewhat acutely rounded at the angle and strongly serrated, about the middle of its posterior limb there is a large emargination in which is a deep notch receiving a knob of the interoperculum, and beneath it a smaller notch receiving an obtuse tooth rising from the sub and inter-opercular suture. The dorsal fin is toler-

ably uniform and low, the eleventh soft ray is the longest, giving a pointed appearance to the fin; the caudal fin is moderately forked; the second anal spine is thicker but rather shorter than the third, the fifth ray is the longest; the pectoral fins are situated in front of the ventrals, and are long and pointed. The colour of the living fish is, according to Mr. Goldie—"Back brown-pink, belly vermillion, orbit reddish-gold, fins pink edged with brown, tail reddish-brown edged with yellow." The axils and middle rays of pectorals brown.

Two specimens 11 inches long. Native name "Tadiva."

20. MESOPRION GEMBRA, Cuv. & Val.

Gunth., Cat. 1, p. 193. *M. sambra*, Bl., and *L. yapilli* and *immaculatus*, Cuv. & Val. *Lutjanus argentimaculatus*, Bleek., Atl. Ichth. Perc. p. 74 tab 55, f. 1.

"Acara" of the Aborigines.

Mr. Goldie's only note is—"Bronze all over, darkre on back," a very poor description. This is a large bulky fish, and seemingly abundant, as I have several specimens. One of them is numbered and labelled as coming from a fresh-water stream near Cuppa-Cuppa, with the native name of "Jemera" and described as—"Bronze-grey on back, fins and tail, reddish on belly."

21. MESOPRION SEMICINCTUS, Cuv. & Val.

Gunth., Cat. 1, p. 209, and Journ. Mus. Geof., Heft 2, p. 15, taf 17. *Lutjanus semicinctus*, Bleek., Atl. Ichth. Perc. p. 63, tab 63, f. 3.

"Oddu-oddū" of the Aborigines.

22. MESOPRION BOHAR, Cuv. & Val.

Gunth., Cat. 1, p. 190, and Journ. Mus. Godef., Heft. 3, p. 13, tab. 15. *Lutjanus bohar*, and *quadriguttatus*, Bleek., Atl. Ichth. Perc. 64, tab 70, f. 4.

"Terho" of the natives.

23. *MESOPRION FULVIFLAMMA*, Cuv. & Val.

Gunth., Cat. 1, p. 201.—Bleek., Atl. Ichth. Perc. 65, tab 66, f. 3.

“Hau” of the natives.

Several specimens about 10 inches in length.

24. *MESOPRION MONOSTIGMA*, Cuv. & Val.

Gunth., Journ. Mus. Godef., Heft 3, p. 14, taf. 16.

“Hau” of the natives.

This species has been frequently confounded with the preceding one. I have several specimens of both before me, and can confidently assert them to be distinct.

25. *MESOPRION QUINQUELINEATUS*, Cuv. & Val.

Gunth., Cat. 1, p. 209.—Bleek., Atl. Ichth. Perc. 56, tab 65, f. 4.

“Bonohiri” of natives.

This species seems to resemble *Genyoroge Bengalensis*, and may possibly be the same, Dr. Bleeker’s plates of the two species only differ in the number of the blue longitudinal lines, a by no means satisfactory distinction.

26. *MESOPRION VITTA*, Cuv. & Val.

Gunth. Cat. 1, p. 207.—Bleek., Atl. Ichth. Perc. 51, tab 62, f. 5.—Proc. Linn. Soc. N. S. Wales, Vol. 5, p. 330.

Syn.—*M. enneacanthus*, *phaetaniatus*, and *Ophusenii*, Bleek.

“Bai” of the Aborigines.

27. *MESOPRION CHRYSOTANIA*, Bleek.

Atl. Ichth. Perc. p. 50, tab 24, f. 4.—Gunth, Cat. 1, p. 192.

“Marawah” of the Aborigines.

28. *MESOPRION RUBENS*, n. sp.

D. 10/14. A. 3/8.

The height of the body is one-third of the total length, and a little more than the length of the head ; the profile is convex ;

the eyes are large and nearly three diameters apart, the space between being convex; the snout is rounded and is distant from the eye more than two diameters of the orbit; the teeth are strong with one more than usually large canine tooth in the upper jaw, lapping over the lower lip; the maxillary bone reaches backwards to beneath the middle of the eye; the praæoperculum is unevenly serrated, and rounded at the angle with a large but shallow emargination receiving a swelling of the interoperculum. The dorsal fin commences in a line with the extremity of the opercular flap and the root of the pectoral fin, the spines are strong, the first small, the fourth and fifth longest, the rays are of uniform length, longer than the tenth spine, and are covered at the base with a scaleless skin; the caudal fin is broad and emarginate; the anal is enveloped in a skin like the soft dorsal, the third spine is the longest and strongest; the pectoral fins are large pointed and a little falcate, the ventrals are shorter, commencing a little behind the pectorals, and terminating before them. The scales on the body are rather large.

Mr. Goldie's description of the colours of this fish is "Dark-brown on back, vermillion on belly," the specimens, however, show pearly lines along the sides, a few spots on the head below the eyes, and the fins seem all to be more or less of a violet colour, or margined with black.

I have two specimens, both large and heavy fishes over twenty inches in length. The native name is "Tchro."

29. *MESOPRION GOLDFEI*, n. sp.

D. 10/13. A. 3/8. I.: lat. about 48.

Height of body one-third of the total length and equal to the length of the head; profile straight; eyes large, rather more than one diameter apart, the space between convex; length from the eye to the extremity of the snout nearly equal to two diameters of the orbit; the teeth are small, those on the vomer very minute; the maxillary bone is broad and triangular, and reaches to below

the anterior third of the eye; the praeperculum is strongly serrated on the angle which is rather acutely rounded, the emargination above it is large but very shallow, and receives a swelling of the suboperculum; the first dorsal spine is very short, the fourth and fifth are the longest, the second anal spine is much thicker than the third; the caudal fin is very slightly emarginate, the pectoral fins are pointed and reach almost to the first anal spine, the ventrals are shorter; the scales of the body are large, smooth, and rather deciduous. The colouration seems to have been dark on the back and sides, every scale having a dark centre, the lower part of the sides and the belly seem to have been silvery or pearly with a yellowish tinge; the head silvery, the dorsal, anal and caudal fins darkish, and the pectorals and ventrals yellow.

I have only one specimen of this fish and it is without a label. In the size of the scales and its general appearance it is unlike any *Mesoprion* I have hitherto seen. Length 20 inches.

30. *MESOPRION PARVIDENS*, n. sp.

D. 10/16. A. 3/8. L. lat. about 58.

Form compressed; height of body one-half of the total length excluding the caudal fin, profile steep and straight; snout short, one and a half diameter of the orbit from the eye; the maxillary reaches to the vertical from the anterior margin of the eye; the teeth are small, the canines included; the eyes are about one diameter apart, the space between slightly convex; the posterior limb of the praeperculum is straight and finely serrated, the angle is more strongly serrated, and a little above it there is a deep notch receiving a knob of the interoperculum; the opercular spines are indistinct; the fourth and fifth dorsal spines are the longest; the soft dorsal, caudal and anal fins are covered with small scales for about half their length, the third anal ray is the longest, giving a pointed appearance to the fin, the second spine is stronger and slightly longer than the third; the pectoral fins are elongate and

slightly falcate ; the tail is slightly emarginate. The general colour is blackish, but every scale has a pearly portion, larger on the belly, which probably in the living specimen was red ; a whitish spot shows on the lateral line below the middle of the soft dorsal ; all the scaleless parts of the head and cheeks seem to have been covered with a number of bluish transverse streaks ; the vertical fins and tail are very dark ; the pectorals are black on the upper rays, and the ventrals have the rays yellow and the membranes black.

One specimen about 8 inches in length. The label attached to this species is illegible.

31. PRIACANTHUS HAMRUHR, Cuv. & Val.

Gunth., Cat. 1, p. 219.—Bleek., Atl. Ichth. Perc. p. 13, tab 75, f. 3.

“Daburu” of the natives.

“Bright crimson all over.” (Goldie.)

32. AMBASSIS MACRACANTHUS, Bleek.

Gunth., Cat. 1, p. 227.—Bleek., Perc. p. 30.

Dr. Bleeker, who originally described this fish in his “Fishes of Batavia,” subsequently, in his “Atl. Ichth. Perc.,” makes it a synonym of *Ambassis Commersonii*. I am disposed to think that he was right in the first instance.

33. APOGON SANGIENSIS, Bleek.

Gunth., Cat. 1, p. 235.—Journ. Mus. Godef. Heft. 2, p. 20.
Amia sanguensis, Bleek., Atl. Ichth. Perc. p. 95, tab 41, f. 4.

34. APOGON ZOSTEROPHORUS, Bleek.

Gunth., Cat. 1, p. 245.—*Amia zosterophora*, Bleek., Atl. Ichth. Perc. p. 103, tab 35, f. 2.

35. APOGON LEPTACANTHUS, Bleek.

Gunth., Cat. 1, p. 222.—*Amia leptacanthus*, Bleek., Atl. Ichth. Perc. p. 97, tab 71, f. 3.

36. APOGON NEMATOPTERUS, Bleek.

Gunth., Cat. 1, p. 233.—*Amia nematopterus*, Bleek, Atl. Ichth. Perc. p. 79, tab 35, f. 1.

37. APOGON COOKII, M'Leay.

Proc. Linn. Soc., N.S. Wales, Vol. v., p. 344.

“Meta” of the New Guinea natives.

38. APOGON AMBOINENSIS, Bleek.

Gunth., Cat. 1, p. 234.—*Amia Amboinensis*, Bleek, Atl. Ichth. Perc. p. 90, tab 68, f. 1.

39. APOGON AUREUS, Bleek.

Atl. Ichth. Perc. p. 92, tab 59, f. 1.—Day, Fishes of India, p. 61, tab 16, f. 8.

Syn.—*Apogon annularis*, Gunth.—*A. roseipinnis*, Cuv. & Val.

40. APOGON TÆNIOPTERUS, Benn.

Gunth., Cat. 1, p. 235.—Benn., Pro. Zool. Soc., vol iii., 1835, p. 206.

41. CHILODIPTERUS OCTOVITTATUS, Cuv. & Val.

Cuv. & Val., Poiss. 2, p. 163.—Gunth., Cat. 1, p. 248.—*Paramia macrodon*, Bleek., Atl. Ichth. Perc. p. 105, tab 27, f. 2.

Syn.—*Peramia lineata* and *octolineata*, Bleek., and *C. heptagona*, Bleek.

42. CHILODIPTERUS QUINQUELINEATUS, Cuv. & Val.

Cuv. & Val., Poiss 2, p. 167.—Gunth., Cat. 1, p. 248.—*Paramia quinquelineata*, Bleek, Atl. Ichth. Perc. p. 105, tab 48, f. 2.—*Apogon novemstriatus*, Rüpp.

43. THERAPON ARGENTEUS, Cuv. & Val.

Gunth., Cat. 1, p. 283.—Bleek., Atl. Ichth. Perc. p. 114, tab 61, f. 4.

44. THERAPON CUVIERI, Bleek.

Gunth., Cat. 1, p. 282.—M'Leay, Proc. Linu. Soc. N.S.W., vol. v., p. 362.

45. THERAPON SERVUS, Cuv. & Val.

Gunth., Cat. 1, p. 278.—Proc. Linn. Soc. N.S.W., vol. v., p. 361.—*Therapon jarbua*, Bleek., Atl. Ichth., Perc. p. 112, tab 34, f. 2.

“Toégala” of the New Guinea natives.

46. DULES CILIATUS, Bleek.

Alt. Ichth. Perc., p. 120, tab 46, f. 2.—*Percichthys ciliata*, Gunth., Cat. 1, p. 62.—*Dules marginatus*, *maculatus*, and *malo*, of Cuv. and Val.

“Rurupeti” of the Aborigines.

Found in a small fresh-water stream near Cuppa-Cuppa.

47. PRISTIPOMA HASTA, Bl.

Gunth., Cat. 1, p. 289.—Proc. Linn. Soc. N.S. Wales, vol. v., p. 369. *Pomadasys hasta*, Bleek., Atl. Ichth. Perc. p. 28, tab 47, f. 3.

Syn.—*P. Commersonii*, *kakaan*, and *chrysobalion* of Cuv. & Val. *Labrus Commersoni*, and *Lutjanus microstoma*, of Lacepede.

48. DIAGRAMMA GOLDMANNI, Bleek.

Gunth., Cat. 1, p. 331.—Bleek, Atl. Ichth. Perc., p. 21, tab 17, f. 2. *D. haematochir*, Bleek., Atl. Ichth. Perc. tab 19, f. 3.—Gunth., Cat. 1, p. 332.

“Houmyri” of the natives.

49. DIAGRAMMA PAPUENSE, n. sp.

D. 11/18. A. 3/8. L. lat 65.

This species has the general appearance of *D. pardalis*. but in all my specimens the number of the dorsal spines are eleven,

whereas in *pardalis* and *chætodonoides* there are invariably twelve. The marking seems to be very variable, my larger specimens being spotted densely all over with brown, excepting on the belly, while others, smaller ones, are covered with very large brown spots, excepting on some whitish patches, which have smaller spots on them. All the fins are spotted, the pectorals most densely; the spinous dorsal is margined with black. The Papuan name is "Tanari."

Mr. Goldie's description of the colour is—" Bright purple with dark brown spots all over, mouth yellowish red."

50. DIAGRAMMA CELEBICUM, Bleek.

Atl. Ichth. Perc. p. 18, tab 51, f. 3.

"Marawah" of the natives.

51. DIAGRAMMA CRASSISPINUM, Rüpp.

Gunth., Cat. 1, p. 319.—Bleek., Atl. Ichth. Perc., p. 16, tab 64, f. 1.

Syn.—*D. affine*, Gunth., *Pristipoma nigrum* of Cuv. and Val., Cant., and Gunth.

"Matavabo" of the natives.

52. DIAGRAMMA CENTURIO, Cuv. & Val.

Gunth., Cat. 1, p. 322.

Dr. Bleeker makes this species and *D. punctatum* into synonyms of his *Plectorrhynchus pietus*, but I can see no resemblance.

Papuan name "Gapio." Mr. Goldie's description is—" Light slate colour with small golden-brown spots all over."

53. SCOLOPSIDES MARGARITIFER, Cuv. and Val.

Gunth., Cat. 1, p. 355.—Bleek., Atl. Ichth. Perc., p. 3, tab 39, f. 2. "Degari" of the natives.

Mr. Goldie's note to this species is—"Back greenish purple, scales yellow edged with white; belly white; orbit hazel, with violet rim; side fins and upper division of tail yellow; upper fins and lower part of tail purple."

54. *SCOLOPSIS CILIATUS*, Lacep.

Gunth., Cat. 1, p. 355.—Bleek., Atl. Ichth. Perc. p. 6, tab 38, f. 2. "Matabibi" of the natives.

55. *SCOLOPSIS BILINEATUS*, Cuv. and Val.

Gunth., Cat. 1, p. 357.—Bleek., Atl. Ichth. Perc. p. 7, tab 45, f. 2. "Wonano" of the Aborigines.

56. *SCOLOPSIS TRILINEATUS*, Kner.

Gunth., Journ. Mus. Godef. Heft. 5, p. 31, pl. 25, f. A.—Bleek., Atl. Ichth. Perc. p. 5, tab 53, f. 2.

"Wonano" of the natives.

57. *SCOLOPSIS MONOGRAMMA*, Cuv. and Val.

Gunth., Cat. 1, p. 358.—Bleek., Atl. Ichth. Perc., p. 11, tab 57, f. 3.

"Bai" of the natives.

58. *SCOLOPSIS TEEMPORALIS*, Cuv. & Val.

Gunth., Cat. 1, p. 360.—Voy. Coquille, Poiss. pl. 26.

59. *GERRES ABBREVIATUS*, Bleek.

Atl. Ichth. Perc. tab 78, fig. 4.—Gunth., Cat. 4, p. 257.

60. *GERRES GIGAS*, Gunth.

Gunth., Cat. 4, p. 25.—Journ. Mus. Godef. Heft. 5, p. 30, tab 24, f. A.

"Heala" of the natives.

61. GERRES MACRACANTHUS, Bleek.

Atl. Ichth. Perc. tab 78, f. 1.—Gunth., Cat. 4, p. 261.

“Heala” of the natives. A fresh water species.

62. GERRES ACINACES, Bleek.

Atl. Ichth. Perc. pl. 77, fig. 2.—Gunth., Cat. 4, p. 262.

“Heala” of the natives.

63. PENTAPUS CANINUS, Bleek.

Atl. Ichth. Perc., p. 103, pl. 30, fig. 3.—*Heterognathodon xanthopleura*, Gunth., Cat. 1, p. 365.

“Kinkin” of the natives.

64. PENTAPUS AUROLINEATUS, Cuv. & Val.

Gunth., Cat. 1, p. 381.—Journ. Mus. Godef. Heft. 5, p. 33, pl. 25 B.

“Mocobura” of the natives.

65. CÆSIO CÆRULAUREUS, Cuv. & Val.

Gunth., Cat. 1, p. 322.—Bleek., Atl. Ichth. Perc. p. 39, tab 19, f. 4.

“Vaber-vaber” of the natives.

66. CÆSIO ERYTHROGASTER, Cuv. & Val.

Bleek., Atl. Ichth. Perc. p. 36, tab 34, f. 3.—*Odontonectes erythrogaster*, Gunth., Cat. 1, p. 265.—Proc. Linn. Soc., N.S.W., vol. i., p. 269.

“Cavi” of the natives; young named “Kera.”

67. CÆSIO PISANG, Bleek.

Atl. Ichth. Perc. p. 38, tab 6, f. 2.—Gunth., Cat. 1, p. 391.

“Ciro-ciro” native name.

FAMILY SQUAMIPINNES.

68. CHÆTODON STRIGANGULUS, Cuv. & Val.

Gunth., Cat. 2, p. 4, and Journ. Mus. Godef. Heft 5, p. 35, tab 26,—A.—*Megaprotodon strigangulus*, Bleek., Atl. Ichth. Chæt. 54, tab 13, f. 4.

Syn.—*C. triangularis*, Rüpp.—*C. trifascialis*, Gunth.—*C. bifascialis*, Cuv. and Val., and *C. Leachii*, Cuv. & Val., and Gunth.

69. CHÆTODON AURIGA, Cuv. & Val.

Gunth., Cat. 2, p. 7.—Day, Fishes of India 1, p. 106, pl. 27, f. 3.—*Tetragonopterus auriga*, Bleek., Atl. Ichth. Chæt. 47, tab 11, f. 6.

Syn.—*C. setifer* of Bloch, Cuv. & Val., Lesson, Jennings, and Gunther, and *C. neogallicus* and *Sebanus* of Cuv. & Val.

I give these synonyms on the authority of Dr. Bleeker, who had certainly for many years ample opportunities of forming a correct judgment on such matters.

70. CHÆTODON EPHIPPUM, Cuv. & Val.

Gunth., Cat. 2, p. 7.—Journ. Mus. Godef. Heft. 5, 36 tab 27, A.—Less., Voy. Coq., Poiss. 2, p. 174, pl. 29, fig. 1.—*Tetragonopterus ephippium*, Bleek., Atl. Ichth. Chæt 36, tab 16, f. 2.

Syn.—*C. Garnoti*, Lesson, and *C. principalis*, Cuv. & Val.

71. CHÆTODON UNIMACULATUS, Cuv. & Val.

Gunth., Cat. 2, p. 11.—Journ. Mus. Godef. Heft. 5, p. 37.—*Tetragonopterus unimaculatus*, Bleek., Atl. Ichth. Chæt. 45, pl. 13, fig. 5.

72. CHÆTODON BENNETTI, Cuv. & Val.

Gunth., Cat. 2, p. 12.—Journ. Mus. Godef., Heft. 5, p. 37, pl. 99 A.—*Tetragonopterus Bennetti*, Bleek., Atl. Ichth., Chæt., p. 34, tab 14, f. 2.

Syn.—*C. vinctus*, Benn., Zool. Voy. Bloss., p. 72, pl. 17, fig. 1.

73. CHÆTODON SPECULUM, Cuv. & Val.

Gunth., Cat. 2, p. 12.—*Tetragonopterus speculum*, Bleek., Atl. Ichth. Chæt., p. 34, tab 13, f. 3.

74. CHÆTODON FALCULA, Cuv. & Val.

Gunth., Cat. 2, p. 17.—Journ. Mus. Godef. Heft. 5, p. 39, pl. 27, f. c.—*Tetragonopterus falcula*, Bleek., Atl. Ichth. Chæt., p. 52, pl. 11, fig. 1.

Syn.—*C. ulietensis* and *dizoster* of Cuv. & Val., and Gunther.
“Bebi” of the natives.

75. CHÆTODON KLEINII, Bl.

Gunth., Cat. 2, p. 22.—*Tetragonopterus Kleinii*, Atl. Ichth., Chæt., p. 45, tab 11, fig. 3.

Syn.—*C. virescens*, Cuv. & Val.—*C. melastomus*, Bl.

76. CHÆTODON TRIFASCIATUS, Mungo Park.

Trans. Linn. Soc., 3, p. 34.—Gunth., Cat. 2, p. 23.—*Tetragonopterus trifasciatus*, Bleek., Atl. Ichth. Chæt., p. 35, tab 15, f. 1.

Syn.—*C. vittatus* and *tau-nigrum* of Cuv. & Val. and Gunther.

77. CHÆTODON VAGABUNDUS, L.

Gunth., Cat. 2, p. 25.—Journ. Mus. Godef. Heft. 5, p. 43.—*Tetragonopterus vagabundus*, Bleek., Atl. Ichth. Chæt. p. 48, tab 16, f. 1.

Syn.—*C. pictus* of Cuv. & Val. and Gunther, *C. decussatus*, Cuv. & Val.

78. CHÆTODON RAFFLESII, Benn.

Gunth., Cat. 2, p. 27.—Journ. Mus. Godef. Heft. 5, p. 44, pl. 35 c.—*Tetragonopterus Rafflesii*, Bleek., Atl. Ichth. Chæt. p. 45, tab 14, fig. 4.

Syn.—*C. princeps* and *Sebac* of Cuv. & Val.

79. CHÆTODON DORSALIS, Cuv. & Val.

Gunth., Cat. 2, p. 28.—Playfair, Fishes of Zanzibar, p. 34.—*Chætodon melanotus*, Bl., Gunth., Journ. Mus. Godef. Heft. 5, p. 44.—*Tetragonopterus melanotus*, Bleek., Atl. Ichth. Chæt. p. 43, tab 14, f. 1.

Syn.—*C. marginatus* and *abhortani*, Cuv. & Val.

80. CHÆTODON MILIARIS, Cuv. & Val.

Gunth., Cat. 2, p. 31.—Journ. Mus. Godef. Heft. 5, p. 46, pl. 35 A.—*Tetragonopterus miliaris*, Bleek., Atl. Ichth., Chæt., p. 39, tab 15, f. 3.

Syn.—*C. citrinellus*, Cuv. & Val., and Gunther, *C. guttatissimus* Gunther.

81. CHÆTODON LINEOLATUS, Cuv. & Val.

Gunth., Cat. 2, p. 30.—Journ. Mus. Godef. Heft. 5, p. 45, pl. 34 A.—*Tetragonopterus lineolatus*, Bleek., Atl. Ichth., Chæt., p. 51, tab 15, f. 2.

Syn.—*C. liniatus*, Cuv. & Val.—*C. oxycephalus*, Gunther.

“Bebi” of the natives.

82. CHÆTODON BARONESSA, Cuv. & Val.

Gunth., Cat. 2, p. 31—*Tetragonopterus triangulum*, Bleek., Atl. Ichth., Chæt., p. 53, tab 12, f. 1

Syn.—*C. triangulum*, larvatus, and *karras*, of Cuv. & Val.

83. CHELMO ROSTRATUS, L.

Gunth., Cat. 2, p. 36.—Proc. Linn. Soc., N.S.W., vol. v., p. 391.—*Chelman rostratus*, Bleek., Atl. Ichth. Chæt. p. 22, tab 7, f. 2.—*Chætodon enceelodus*, Shaw.

84. HENIOCHUS VARIUS, Cuv. & Val.

Gunth., Cat. 2, p. 41.—Kner., Voy. Novara Fisch. p. 103.—*Taurichthys varius*, Bleek., Atl. Ichth., Chæt., p. 27, tab 3, f. 2.—*Taurichthys viridis*, Cuv. & Val., Poiss. vii., p. 114.

“Zarariki” of the natives.

85. *HOLACANTHUS SEXSTRIATUS*, Cuv. & Val.

Gunth., Cat. 2, p. 49.—Kner., Voy. Novara, Fisch, 104.—Proc. Linn. Soc. N.S.W., vol. v., p. 395.—Bleek., Atl. Ichth., Chat., p. 66, tab 10, f. 2.

86. *HOLACANTHUS BICOLOR*, Cuv. & Val.

Gunth., Cat. 2, p. 50.—Journ. Mus. Godef. Heft. 5, p. 51. pl. 39 B.—Bleek., Atl. Ichth. Chat., p. 61, tab 7, f. 3.

“*Hidia*” of the natives.

87. *HOLACANTHUS XANTHOMETOPON*, Bleek.

Bleek., Atl. Ichth., Chat., p. 64, tab 9, f. 2.—Gunth., Cat. 2, p. 51. “*Poporaka*” of the natives.

88. *HOLACANTHUS NOX*, Bleek.

Bleek., Atl. Ichth., Chat., p. 62, tab 6, f. 3.—Gunth., Cat. 2, p. 51. “*Gau*” of the natives.

89. *SCATOPHAGUS ARGUS*, L.

Gunth., Cat. 2, p. 58.—Kner., Voy. Novara, Fisch. p. 106.—*Ephippus argus*, Bleek., Atl. Ichth., Chat., p. 21, tab. 1, f. 2.

Syn.—*Scatophagus ornatus*, *Bougainvilli*, and *purpureescens*, Cuv. and Val.

90. *SCATOPHAGUS MULTIFASCIATUS*, Richards.

Richards., Voy. Ereb. & Terr., Fishes, p. 57, pl. 35, f. 4-6.—Gunth., Cat. 2, p. 60.—Proc. Linn. Soc., N.S.W., vol. v., p. 396.

91. *DREPANE PUNCTATA*, Cuv. & Val.

Gunth., Cat. 2, p. 62.—Proc. Linn. Soc. N.S.W., vol. 5, p. 397.—*Harpachirus punctatus*, Bleek., Atl. Ichth., Chat., p. 19, tab 3, f 4.—*Drepane longimana*, Cuv. & Val., Poiss. viii., p. 101.

92. *TOXOTES JACULATOR*, Cuv. & Val.

Gunth., Cat. 2, p. 67.—Casteln., Proc. Zool. Soc., Victoria, vol. 2, p. 84.—Bleek., Atl. Ichth. Chaet., p. 4, tab. 1, f. 4.—Proc. Linn. Soc., N.S.W., vol. v., p. 399.

“Baruki” of the natives.

MULLIDÆ.

93. *UPENEOIDES VITTATUS*, L.

Gunth., Cat. 1, p. 397.—Cuv. & Val., Poiss. 3, p. 448 and 7, p. 520.—Bleek., Atl. Ichth., Mull., tab 2, fig. 3.—Proc. Linn. Soc., N.S.W., vol. v., p. 402.

“Ciu” of the natives; the same name is given to all the species of the family.

94. *UPENEOIDES TRAGULA*, Richards.

Richards, Ichth., China, p. 220.—Gunth., Cat. 1, p. 398.—Bleek., Atl. Ichth., Mull., tab 2, f. 2.—Proc. Linn. Soc. N.S.W., vol. v., p. 402.

95. *UPENEUS BARBERINUS*, Cuv. & Val.

Gunth., Cat. 1, p. 405.—Journ. Mus. Godef. Heft 7, p. 57, taf. 42.—Bleek., Atl. Ichth., Mull., tab 3, fig. 1.—Kner., Fishes of Novara, p. 7.—Proc. Linn. Soc. N.S.W., vol. v., p. 405.

96. *UPENEUS TRIFASCIATUS*, Cuv. & Val.

Gunth., Cat. 1, p. 407.—Journ. Mus. Godef. Heft 7, p. 59, pl. 44 b and c.—Kner., Fishes of the Novara, p. 71.—Jenyns, Zool. Beagle, p. 25.—*Parupeneus multifasciatus*, Bleek., Atl. Ichth., Mull., tab 4, fig. 4.

97. *UPENEUS MALABARICUS*, Cuv. & Val.

Cuv. & Val., Poiss. 3, p. 457.—Gunth., Cat. 1, p. 406.—Journ. Mus. Godef., Heft. 7, p. 58, pl. 45, fig. b.—Proc. Linn. Soc., N.S.W., vol. v., p. 405.

98. UPENEUS LUTEUS, Cuv. & Val.

Cuv. & Val., Poiss. 7, p. 521.—*Parupeneus luteus*, Bleek., Atl. Ichth., Mull., tab 4, fig. 1.

99. UPENEUS CHERSERYDROS, Cuv. & Val.

Cuv. & Val., Poiss. 3, p. 470.—Gunth., Journ. Mus. Godef. Heft 7, p. 60, pl. 45 A.—*Parupeneus cherserydros*, Bleek., Atl. Ichth., Mull., tab 3, fig. 2.

Syn.—*Upeneus cyclostomus*, Cuv. & Val.—*U. oxycephalus*, Bleek.

100. UPENEUS JANSENII, Bleek.

Gunth., Cat. 1, p. 410.—Bleek., Atl. Ichth., Mull., tab 2, fig 4.

SPARIDÆ.

101. PACHYMETOPON SQUAMOSUM, All. & Macl.

All. & Macl., Proc. Linn. Soc. N.S.W., vol. i., p. 275, pl. 9, f. 1.
The number affixed to this fish was illegible.

102. LETHRINUS ROSTRATUS, Cuv. & Val.

Gunth., Cat. 1, p. 454.—Cuv. & Val., Poiss. 6, p. 296—*Lethrinus miniatus*, Bleek., Atl. Ichth., Perc., p. 121, tab 31, fig. 3.—Gunth., Journ. Mus. Godef., Heft. 7, p. 63.

“Vanaka” of the natives.

103. LETHRINUS AMBOINENSIS, Bleek.

Bleek., Atl. Ichth., Perc., pl. 33, fig. 3.—Gunth., Cat 1, p. 455.—Journ. Mus. Godef., Heft. 7, p. 63.

“Manahala” of the natives.

104. LETHRINUS HARAK, Rüpp.

Gunth., Cat. 1, p. 458.—Kner., Fishes of the Novara, p. 81.—Proc. Linn. Soc. N.S.W., vol. v., p. 414.—Bleek., Atl. Ichth., Perc. p. 119, tab 49, fig. 3.

Syn.—*L. erythrurus*, Cuv. & Val.—*L. rhodopterus*, Bleek.

“Tabutu” of the natives.

105. LETHRINUS VARIEGATUS, Cuv. & Val.

Cuv. & Val., Poiss. 6, p. 287.—Bleek., Atl. Ichth., Perc., p. 117, tab 39-50 and 52.

Syn.—*L. elongatus*, *semicinctus*, *microdon*, Cuv. & Val.—*L. latifrons*, Rüpp., Gunth., Cat. 1, p. 458,

“Ahuawia” of the natives.

106. LETHRINUS ORNATUS, Cuv. & Val.

Cuv. and Val., Poiss. 6, p. 310.—Bleek., Atl. Ichth., Perc. p. 118, tab 72, fig. 4.—*Lethrinus xanthotenia*, Gunth., Cat. 1, p. 461.

“Daryya” of the natives.

“Head greyish-yellow, and grey on top; yellowish lines along sides; side fins yellow; top fins and tail crimson, two deep crimson marks across gills.”—(Goldie.)

107. LETHRINUS LEUTJANUS, Cuv. & Val.

Gunth., Cat. 1, p. 461.—Bleek., Atl. Ichth., Perc., p. 120, tab. 76, fig. 5.

“Daragi” of the natives.

108. LETHRINUS AUROLINEATUS, n. sp.

The height of the body is greater than the length of the head, and about three and a half times in the total length. The profile is straight, the snout rather pointed; the intermaxillary reaches to the vertical from midway between the eye and snout, the distance from the eye to the snout is equal to three diameters of the orbit, and that between the eyes to nearly two diameters. The teeth are strong, the molars on the sides obtusely rounded. The dorsal fin commences in front of a line from the root of the pectorals, these long and pointed; caudal fin forked. Scales

rather large, L. lat. about 45. The colour seems to have been a pale yellowish olive, with about eleven golden longitudinal streaks on each side of the body; the fins seem to have been of a uniform yellow; the head shows some traces of dark bands between the snout and eyes and between the eyes.

I have two specimens of this fish, the largest about 18 inches in length. Mr. Goldie gives no description of the colour.

CIRRHITIDÆ.

109. CIRRHITES FORSTERI, Bl.

Gunth., Cat. 2, p. 71.—Journ. Mus. Godef. Heft. 7, p. 69, pl. 49 A.—*Paracirrhites Forsteri*, Bleek., Atl. Ichth., Perc., p. 143, tab 71, fig. 5. *Cirrhites pantherinus*, Cuv. & Val.—Less., Voy. Coquille, Poiss. p. 225, pl. 22, fig. 1.

No native name.

SCORPÆNIDÆ.

110. SCORPÆNA GIBBOSA, Bl.

Gunth., Cat. 2, p. 119.—Journ. Mus. Godef., Heft. 7, p. 79, pl. 53.—*Scorpænopsis gibbosus*, Bleek., Atl. Ichth., Scorp., tab 6, f. 4.
Syn.—*S. nesogallica*, Cuv. & Val. “Nohu” of natives.

111. SCORPÆNA POLYLEPIS, Bleek.

Sebastopsis polylepis, Bleek., Atl. Ichth., Scorp., tab. 5, fig. 1.
—*Sebastes polylepis*, Gunth., Cat. 2, p. 106.

“Decaca” of the natives.

112. PTEROIS VOLITANS, L.

Cuv. & Val., Poiss., 4, p. 258, fig. 88.—Gunth., Cat. 2, p. 122.
—*Pseudomonopterus volitans*, Bleek., Atl. Ichth., Scorp., tab 2, f. 3.—*Pterois muricata* and *geniserra*, Cuv. & Val.—*P. miles*, Gunth.

“Manu-Manu” of the natives.

TEUTHIDIDÆ.

113. TEUTHIS CORALLINA, Cuv. & Val.

Gunth., Cat. 3, p. 316.—Journ. Mus. Godef., Heft. 7, p. 88.—*Amphacanthus corallinus*, Cuv. & Val. 10, p. 139.

“Gani” of the natives.

114. TEUTHIS VERMICULATA, Cuv. & Val.

Gunth., Cat. 3, p. 317.—Proc. Linn. Soc. N.S.W., vol. v., p. 443.—*Amphacanthus vermiculatus*, Cuv. & Val., Pois. 10, p. 126.

“Urayo” native name.

115. TEUTHIS ALBOPUNCTATA, Schleg.

Gunth., Cat. 3, p. 318.—Journ. Mus. Godef., Heft 7, p. 88.—*Amphacanthus dorsalis*, Bleek.—*A. margaritiferus* and *fuscescens*, Richards.

“Gani” of the natives.

116. TEUTHIS DOLIATA, Cuv. & Val.

Gunth., Cat. 3, p. 323.—Journ. Mus. Godef., Heft 7, p. 90.—*Siganus doliatus*, Cuv.—*Amphacanthus doliatus*, Cuv. & Val.

117. TEUTHIS PUELLA, Schleg.

Gunth., Cat. 3, p. 323.—Journ. Mus. Godef., Heft 7, p. 91.—*Amphacanthus puellus*, Schleg., Bydr. tol de Dierk. 1852, p. 39, fig. 2.—*Amphacanthus cyanotænia*, Bleek., Ternate 2. p. 606.

“Gani” of the natives.

118. TEUTHIS TUMIFRONS, Cuv. & Val.

Gunth., Cat. 3, p. 317.—*Amphacanthus tumifrons*, Cuv. & Val., Poiss. 10, p. 159.

119. TEUTHIS ARGENTEA, Cuv. & Val.

Gunth., Cat. 3, p. 322.—Journ. Mus. Godef. Heft. 7, p. 90.—*Amphacanthus argenteus*, Quoy and Gaim., Voy. Uran. Zool. p. 368, pl. 62, fig. 3.

120. TEUTHIS ROSTRATA, Cuv. & Val.

Amphacanthus rostratus, Cuv. & Val., Poiss., 10, p. 158.—*Teuthis rostrata*, Gunth., Journ. Mus. Godef., Heft 7, p. 89, taf. 60.

A MONOGRAPH OF THE AUSTRALIAN APHRODITEA.

BY WILLIAM A. HASWELL, M.A., B.Sc.

[Plates VI.—XI.]

The Australian Marine Annelides have not formed the subject of any special investigations, but scattered notices of Australian species are to be found in the works of Schmarda,* Kinberg,† Baird,‡ and Quatrefages.§

Of the order to which the present paper is confined the last-named author enumerates and describes six Australian species including those described by Kinberg and Schmarda, and to those Dr. Baird adds five more from among the specimens in the collection of the British Museum. Though the thirty species enumerated in this paper cannot be regarded as a complete list of all the Australian Annelides belonging to this section, yet from the wide extent of coast from which they have been collected, from Torres Straits to Port Western, they may be looked upon as furnishing us with a tolerably correct idea of the general

* "Neue Wirbellose Thiere, Band I."

† "Oefversigt af K. Vet.-Akademiens Förhandlingar," 1855, p. 381; and "Eugenies Resa, Annulata."

‡ "Contributions towards a Monograph of the Aphroditacean Annelides." Proc. Linn. Soc., Vol. viii., p. 176.

§ "Histoire Naturelle des Annélés, Vol. I."